

tendency of the resin bed to fall down due to the higher specific gravity of the resin as compared to that of the liquid, more regenerant are required during regeneration although it is still less than that of the cocurrent system.

On page 6, delete the paragraph beginning on line 18 through line 29, and replace it with the following:

The design of the system of this invention comprises a vertical column divided into two vertical compartments with free space in the lower part so that both compartments are interconnected and form a U tube type connection. They are filled with one or more types of ion exchange resin. The upper part of each compartment is equipped with upper bed containing nozzles. There is a free board above the resin bed to accommodate the expansion of the resin bed occurring after being exhausted or during regeneration. The direction of flow during service cycle is from top to bottom in one compartment and upward in the other compartment. The direction of flow during regeneration process, which is conducted from the other compartment, is also from top to bottom and then flows upward through the other side.

On pages 6 and 7, please delete the paragraphs beginning on line 34 of page 6 and ending on line 5 of page 7.

On page 7, delete the paragraph beginning on line 6 through line 9, and replace it with the following:

Because of the U tube form, the force required to compact the resin during service cycle as well as during regeneration cycle is very small. Consequently, low velocity is sufficient to compact the resin. The equation is based on the drag force applied by flow against particle.

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On page 7, please delete the paragraph beginning on line 10, and replace it with the following:

With reference to FIG. 10, consider the U tube model of the present invention as shown in FIG. 10.

On page 8, please delete the paragraph beginning on line 5, and replace it with the following:

With reference to FIG. 11, now consider a conventional system with a resin column in a straight tube as shown in FIG. 11. The resin column is displaced a distance h to make it compact. Suppose the length of the resin column is L and its mass is m .

On page 10, please delete the paragraphs beginning on line 28 through line 35, describing FIGS. 10A, 10B, 11A, 11B, 12 and 13, and replace them with the following:

FIG. 10 is a schematic representation of a U tube model of the present invention.

FIG. 11 is a schematic representation of a resin column.

On page 13, please delete the paragraph beginning on line 21 and ending on line 29.

On pages 16 and 17, please delete the paragraphs beginning on line 19 of page 16 and ending on line 7 of page 17.

In the Claims:

Cancel claims 12, 13 and 14.

Amend claim 6 as follows:

6. (Amended) An apparatus for conducting liquid separation utilizing an ion exchange process, the apparatus comprising: